

ABSTRACT OF THE INVENTION

This invention provides methods for modulating phosphate homeostasis and renal phosphate transport by delivering agents that alter the expression of the FRP-4 gene or alter the activity of the FRP-4 protein. The methods of the invention are useful for modulating bone mineralization, renal phosphate transport, alleviating oncogenic osteomalacia-associated symptoms and treating phosphate homeostasis-related disease. The invention further provides methods for reducing phosphate re-absorption by delivering to a subject FRP-4 protein or polynucleotides that encode this protein. In addition, the invention provides methods for detecting and monitoring expression of the FRP-4 gene and modulating the phenotype of a neoplastic cell associated with oncogenic osteomalacia. Finally, the invention provides methods for screening candidate agents to identify compositions that modify the activity of the FRP-4 gene and protein.